likely, however, that the polypoid mass originated with some shred of membrane or clot of blood, rather than an ordinary fibrous growth independent of the puerperal state.

The second question relates to treatment. Is it advisable to explore the cavity of the uterus in every case when we know that *small* fragments of the placenta or membrane are left behind?

Usually I would follow the conservative plan of trusting nature to expel them; but, on the slightest provocation, either by reason of hemorrhage or suspicion of sepsis, the uterine cavity should be explored and made clean as possible, in accordance with modern antiseptic methods.

Medical Progress.

RECENT PROGRESS IN SURGERY.

BY H. L. BURRELL, M.D., AND H. W. CUSHING, M.D.

EXPERIMENTAL RESULTS WITH ANTISTREPTOCOCCIC SERUM.

Petruschky[1] reports that his experiments with cultures of streptococci and an antistreptococcic serum sent to him by Marmorek have not obtained the same promising results which that investigator reported. In the first place, he found that a dose stated by Marmorek to be absolutely fatal killed his rabbits only exceptionally. In fact, two of his own cultures of streptococci, which he had grown for two years, proved to be more virulent, so that their actions were not checked by antistreptococcic serum, although the latter was injected within twenty-four hours of the time of infection. The author, under the circumstances, thinks he is justified in his conclusions (1) that the therapeutic action of the serum is not yet to be recommended in man; and (2) that up to the present time there is no certain proof of the possibility of serum-therapy in streptococcic infection.

EFFECTS OF ETHER ON THE BLOOD.

The author of this paper, Von Lerber,[2] bases his conclusions on examinations of the blood of 101 patients. One or two examinations were made before etherization, and from two to four examinations afterward.

The quantity of hemoglobin was compared in 98 cases. In 65 cases it was the same after operation as before; 19 times there was an increase, 14 times a diminution, but in only two instances did this amount to 10 per cent., and in these there was great loss of blood at the operation. Ether, therefore, does not affect the quantity of hemoglobin.

The red blood-cells were counted in 101 cases. In 55 cases they were increased, in 42 diminished, and in four there was no change. The gain and loss were in most cases only temporary. So that it may safely be said that ether has no deleterious influence on the red blood corpuscles. A spectroscopic examination of the urine in 83 cases failed to show any increase in urobilin. This is further evidence that the red blood-corpuscles were not destroyed.

[1] La Presse Médicale, November 11, 1896; Medical News, January 9, 1897, p. 51.

[2] Inaug. Diss., Basel, Schweiz. Verlagsdruck, 1896; Medical News, October 17, 1896, p. 438.

In 96 cases the white blood-corpuscles were increased; in five they were diminished. In three of these latter the opening of abscesses (which had caused pathological leucocytosis before the operation) sufficiently explained the decrease in white corpuscles. In one case the decrease seemed due to rapidly approaching death, and in the other case the decrease was insignificant. The author concludes that etherization often occasions a marked leucocytosis.

THE APPLICATION OF SCHLEICH'S METHOD OF COCAINIZATION.

Gottstein[3] published results of cocainization by the method of infiltration in 118 operations. Nearly one-half of these were for the extirpation of tumors. There were eight cases of resection of the vas deferens, two cases of strangulated hernia, ten gastrostomies, and several exploratory laparotomies. One advantage of this method is that the patient can usually get down from the table immediately after the operation, so that hypostatic pneumonia, which so often follows ether operations in feeble patients, is avoided. It was a great pleasure to observe how slight a reaction followed these "major" operations. As far as possible an Esmarch bandage was used after the injections were made. The anesthesia usually lasted thirty minutes, sometimes still longer. In only two cases was there any evidence of cocaine intoxication.

THE SURGICAL TREATMENT OF FOCAL EPILEPSY.

Sachs and Gerster[4] contribute a paper which presents a critical analysis of 19 cases operated upon by the authors. Of these, three are reported as cured, five as improved and eleven as unimproved. Of this last group three died as the result of the operation. The authors concede that surgical procedures will avail but little in the majority of cases. In all of the cases in which no improvement resulted, the operation was not undertaken until many years had passed after the inital trauma, and after the beginning of the epilepsy. They conclude that if a long period of time has elapsed, all operative procedures will prove equally unavailing. As a result of their study of these cases, the paper closes with the following conclusions:

(1) Surgical interference is advisable in those cases of partial epilepsy in which not more than one or, at the utmost, two years have elapsed since the traumatic injury or the beginning of the disease which has given rise to the convulsive seizures.

(2) In cases of depression or other injuries of the skull surgical interference is warranted, even though a number of years has elapsed; but the prospect of recovery is brighter the shorter the period of time since the injury.

(3) Simple trephining may prove sufficient in a number of cases, and particularly in those in which there is an injury to the skull or in which a cystic condition is the main cause of the epilepsy.

(4) Excision of cortical tissue is advisable if the epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease.

(5) Since such cortical lesions are often of a microscopical character, excision should be practised even if the tissue appears to be perfectly normal at the time of operation; but the greatest caution should be exer-

[3] Centralbl. f. Chir., No. 50, 1896; Medical News, March 20, 1897.

[4] American Journal of Medical Sciences, October, 1896; Annals of Surgery, February, 897, p. 209.

cised in order to make sure that the proper area is removed.

(6) Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted, particularly if too long an interval has not elapsed since the beginning of the palsy.

(7) In cases of epilepsy of long standing, in which there is in all probability a wide-spread degeneration of the association-fibres, every surgical procedure is useless.

A METHOD OF DEFINING THE FISSURE OF ROLANDO.

Morison describes the following method for locating the fissure of Rolando:[5]

"The measurements may be made with a piece of sterilized silk marked off by knots to form the triangle, or by defining the sides of the triangle by means of the surgeon's finger, whose length is already known. A point is taken half-way between the glabella and the external occipital protuberance, and the breadth of the little finger behind it (about half an inch) indicates the apex of the triangle. An isosceles triangle is then mapped out on the scalp; its sides are three and three-quarters inches long. One lies in the middle line forward from the point mentioned above. The base measures four and one-eighth inches, and is anterior. The posterior side of the triangle is over the fissure of Rolando. Trigonometrically the apical angle of this triangle is 67° 27′ 52″, and this is practically identical with the angle formed by the fissure and the middle line of the skull worked out by other methods, and, from an examination of a large number of skulls of various sizes, is constant and correct."

THE MORTALITY OF HARELIP, WITH AND WITHOUT OPERATION.

Fahrenbach[6] writes of 210 cases of harelip, which were operated upon in Gottingen from 1885–95. Rejecting the too minute classifications of cases which some authors have made (Stobwasser enumerates thirteen different types), he has arranged his material in four groups, according as the cleft in the lip was single or double, and with or without complications in gums or elsewhere. The different operations performed are accurately described and illustrated, but an especial interest attaches to the mortality. The immediate results were satisfactory. In 166 cases the operation was entirely successful, and of the 210 cases only nine died — about four per cent.; but when the cases were followed for a considerable time the author found the mortality to be discouraging. This is especially true of the cases with complications. Thus, the cases of single harelip with complications showed a mortality in two weeks of 5.7 per cent., which in three months was doubled, and at the end of one year had risen to 30 per cent. of all the cases of this class. The death-rate for bilateral cases with complications was 17 per cent. for two weeks, and the same for three months, but was over 50 per cent. at the end of the year. Including all the cases operated upon, the mortality at the end of two weeks was 7.5 per cent., at the end of three months 10.7 per cent., and 32.3 per cent. at the end of a year; and by deaths after one year these figures were raised to 41.8 per cent.

According to these figures one-third of all children operated upon for harelip fail to live a year, and probably not one-half of them live to grow up. But these figures are to be compared not with those of healthy children, but with those of cases of harelip without operation. Just what the mortality among such deformed children is, is not known, but it must be high. For example, in one hospital[7] 14 per cent. of the patients with harelip died before they could be operated upon. Generally speaking, the earlier the patients are operated upon the more of them succumb in the succeeding months; but this the author considers due to the fact that many of the children would not in any case be able to live. He is an advocate of an early operation (sixth to eighth week) for the lip, leaving until later the treatment of any deeper deformity which may be present.

SURGICAL TREATMENT OF BASEDOW'S DISEASE.

Professor Mikulicz, of Krakau, is favorably impressed by the operative treatment of this affection. His conclusions are based on the analysis of 11 cases. Nine had exophthalmos; all tachycardia, with pronounced nervous and mental symptoms. Most of the patients also showed typical trophic disturbances. There were seven cases of diffuse hyperplasia, three with circumscribed nodules; and in one case (a cyst with five) the trachea was compressed, causing dyspnea. Two were treated by ligature of the thyroid arteries, three by enucleation, five by resection (three bilateral, two unilateral). There were no deaths. Six were cured (after one to nine and one-half years). Four were much improved, one slightly improved (by ligation, unilateral). Improvement of symptoms continued for a long time after operation. For diffuse goitre ligation of the four thyroid arteries is recommended; for circumscribed nodules and cysts, "Socin's" enucleation; and resection for those cases not benefited by ligation (it is much more difficult and dangerous than in simple goitre).

The rate of improvement after operation is varied — the symptoms in some cases having ceased entirely in a few weeks, in others months and even years are required. The psychical and nervous symptoms usually disappear first; for example, restlessness, insomnia, vertigo, cardiac palpitation, etc. The disturbances of circulation cease next; the exophthalmos and trophic derangement last. Mikulicz thinks that the most of the symptoms are due to auto-intoxication by thyroid products, and that the first effect of the operation is to reduce the supply of toxic substances. He considers operative treatment indicated where medicinal treatment has failed and where dyspnea is present.

PRELIMINARY RESECTION OF THE FIFTH COSTAL CARTILAGE IN ORDER TO APPROACH THE PERICARDIUM.

Durand[8] recommends this method of reaching the pericardium in operations on this structure. This operation was first suggested by Ollier. Some writers advise the resection of the sixth cartilage also, but Durand has found the space afforded by removal of the fifth entirely sufficient.

The author recommends the resection of the fifth cartilage preliminary to simple aspiration. He lays stress on the chance of serious injury from a puncture, even with a small needle, through an intercostal space,

[5] British Medical Journal, 1896, No. 1868; American Journal of Medical Sciences, January, 1897, p. 116.
[6] Deutsch. Zeit. f. Chir. vol. xl, p. 81; Medical News, November 14, 1896, p. 555.
[7] Rose: On Harelip and Cleft Palate, London, 1891.
[8] Revue de Chirurgie, 1896, No. 6; American Journal of Medical Sciences, December, 1896, p. 718.

as the operator does not know where his needle is going. The operation has its chief indication, however, in performing pericardotomy for purulent pericarditis.

The chief difficulty in the operation is the costo-mediastinal cul-de-sac in separating the sternal end of the cartilage. In the tuberculous the cartilage may be very adherent. In those who have had no inflammatory infection of the lungs the procedure is simple. In some cases the recognition of the pericardium will be difficult. The perichondrium is to be removed with the cartilage.

Technique. — (1) The incision is made on the fifth costal cartilage, parallel to it, and from six to eight centimetres long. It should commence in the median line. (2) Rapid denudation of the cartilage by a bistoury. (3) Resection of the cartilage by separating the sternal attachment and lifting from behind forward. Durand adds ligature of the mammary vessels. Secondary ulceration or accidental perforation are thus provided against. The fingers then loosen the triangularis sterni. The border of the sternum may be removed by the gouge if more space is required.

OPERATIVE TREATMENT OF PHLEGMONS OF THE POSTERIOR MEDIASTINUM.

Obalinski [9] after reviewing the history of these operations, reports five cases of his own, making in all a total of 13 cases which had the similarity that in all a resection of the ribs was made near their spinal articulation, and the costal pleura dissected up from the heads of the ribs and the thoracic vertebræ, thus permitting an access to the vertebræ themselves or to the posterior mediastinal space. The shape of the incision the author does not believe is essential. The dissection of the costal pleura from the bone was successfully performed, with the exception of two instances in the living patient, in which the author tore the costal pleura and produced a traumatic pneumothorax; the wound, was, however, closed with sterile gauze; during the remainder of the operation no infection ensued, and the only result was a pneumothorax, which was not purulent, and passed off in one or two days after the operation.

As special indications for this operation the author gives these: (1) a cervical abscess which leads down into the posterior mediastinum or is the outgrowth of a mediastinal abscess; (2) an abscess originating near the spine; (3) a fistula in the lumbar or thoracic region; (4) a foreign body in the esophagus whose exact location we know, that is, into which wall it has penetrated.

TREATMENT OF CICATRICIAL STRICTURE OF THE ESOPHAGUS.

F. Peterson [10] reports the successful treatment of a badly constricted esophagus by the combined method of gastrostomy and gradual dilatation from below. The strictures were caused by caustic potash. One was at the level of the bifurcation of the trachea, and one near the cardiac orifice of the stomach. A gastrostomy was done two months after the accident with some relief. Four years later the Kraske dilatation was done. The upper stricture was then permeable to a No. 28 sound. The patient was told to swallow a silk thread knotted at its ends. After this reached the stomach, which occurred in about five minutes, it was brought out through the gastric opening by flushing the stomach with water. As the water flowed from the stomach the end of the thread was washed out with it. To this end an ivory olive was attached, and to this another thread 50 centimetres long. To this latter thread a still larger olive was fastened. These were then drawn upward through the esophagus by pulling on the oral end of the thread. In this way the strictures were gradually dilated from below, beginning with No. 13 and using successively 15, 18, 20, 23, 25 and 28. When the dilatation reached 28, the passage of sounds from above was resumed, which were gradually increased in size to No. 54. The patient continues to pass No. 48 himself every three weeks, which is easily accomplished.

[9] Wiener klin. Woch., December 10, 1896; American Journal of Medical Sciences, March, 1897, p. 351.

[10] Verhandlungen der deutschen Gesellschaft. f. Chir. XXIV Kongress, 1895.

PATHOLOGY AND TREATMENT OF GUN-SHOT WOUNDS OF THE ABDOMEN.

Klemm [11] (Riga) has written an interesting monograph on this subject. He reviews the literature of the subject, the results of his own experiments on dogs, and presents his conclusions from both. They correspond to all general opinions held at present by American and German Surgeons. He does not believe in the expectant method of treatment advocated by the French, especially Reclus, who claims that this shows a lower mortality; that the prolapse of the mucous membrane through perforations in the hollow viscera plugs the wound till plastic exudation seals it. Klemm found that the plug so described occurred, but that it did not prevent leakage of intestinal contents when the slightest pressure was made. This was also the clinical experience of Sonnenberg and Von Bergmann. Klemm also found that the abdominal viscera were perforated in a majority of cases. In 152 clinical observations of Lück only three escaped without injury of viscera. Local symptoms of injury were noted only eight times. The general symptoms of shock or beginning peritonitis were far more frequent.

The size of the wound was determined by the angle of the direction of the striking bullet with the surface struck and by the diameter of the intestine at the point struck. When death is not immediate from hemorrhage or shock, it is caused by septic intoxication from the toxins formed by the germs in the blood-clot which is always present. Adhesions may occur, abscesses from which sooner or later rupture and cause death. Klemm condemns Senn's gas test, which he claims increases the danger of fecal extravasation. He advocates immediate operation in all cases in which the patient's condition permits it. His plan of operation corresponds with that commonly followed by American surgeons, namely, to explore the wound of entrance, and if it is found to have penetrated the abdominal cavity to open it at once. He considers the presence of peritonitis or weakness due to septic intoxication as contraindications.

(*To be continued.*)

MR. HEATH TO LECTURE IN SAN FRANCISCO. — Mr. Christopher Heath, late President of the Royal College of Surgeons, England, has accepted the invitation to deliver the second course of Lane Medical Lectures at Cooper Medical College, San Francisco.

[11] Volkmann's Samml. klin. Vorträge, 1896, No. 142.